

Mass Storage Accelerator

ABSTRACT OF THE DISCLOSURE

A data storage device is provided. A disk device is combined with a non-volatile memory device to provide much shorter write access time and much higher data write speed than can be achieved with a disk device alone. Interleaving bursts of sector writes between the two storage devices can effectively eliminate the effect of the seek time of the disk device. Following a non-contiguous logical address transition from a host system, the storage controller can perform a look-ahead seek operation on the disk device, while writing current data to the non-volatile memory device. Such a system can exploit the inherently faster write access characteristics of a non-volatile memory device, eliminating the dead time normally caused by the disk seek time.